ABSTRACT OF THE DISCLOSURE

Interleavers for optical systems, including multiplexers and demultiplexers, are based on the use of non-birefringent elements in combination with polarization beam splitter to provide differential retardation effects for generation of precise transmittance functions. The retardation elements, in one particular example, are non-birefringent glasses arranged in individually athermal stages but the optical beams propagated through them are maintained in selected polarization states in each stage. Between or within the stages the polarization vectors are varied to match phase to a selected standard, such as an ITU grid. Within the stages, selected beam angle adjustments are made to shape the output transmittance characteristic.